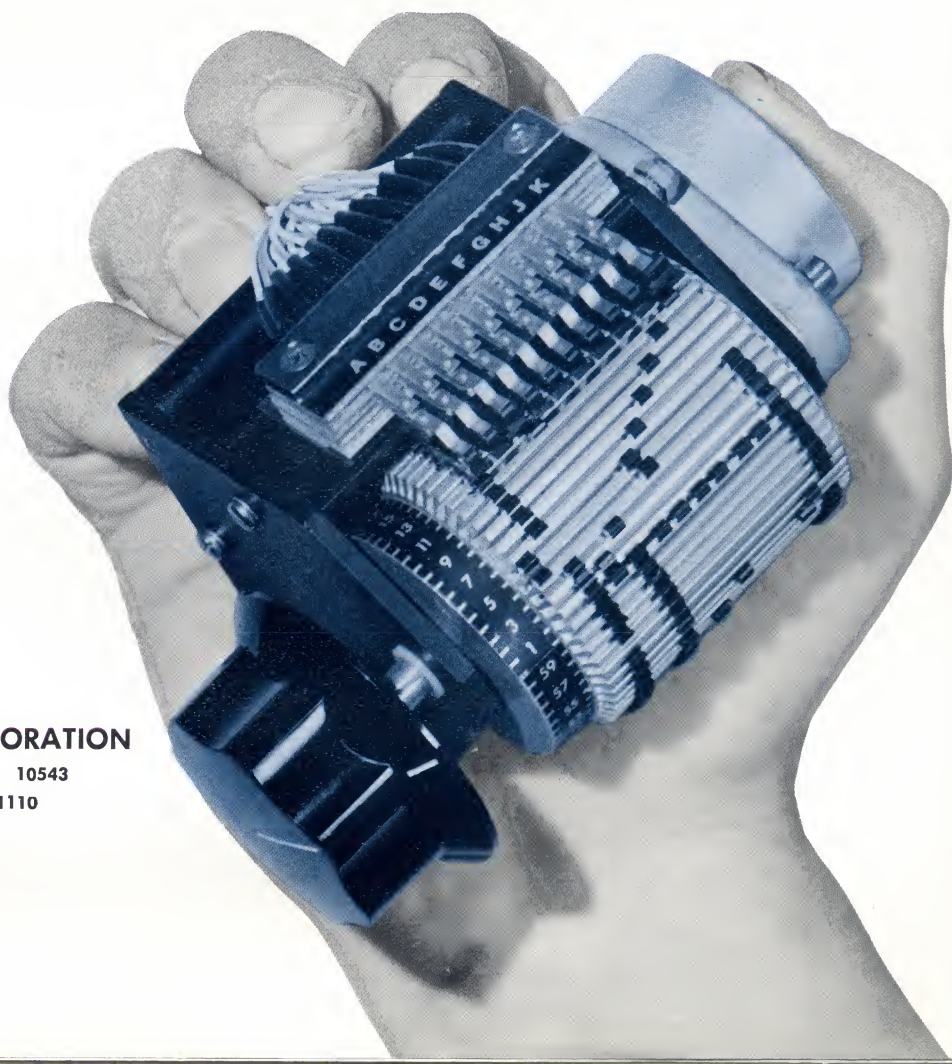


ACTAN PROGRAMMING SWITCHES

for . . . SEQUENCING • TIMING • SCANNING
MULTIPLEXING • GENERAL PROGRAMMING
CODE GENERATION • INTEGRATING



Programming Devices Division

SEAELECTRO CORPORATION

225 Hoyt Street, Mamaroneck, N.Y. 10543

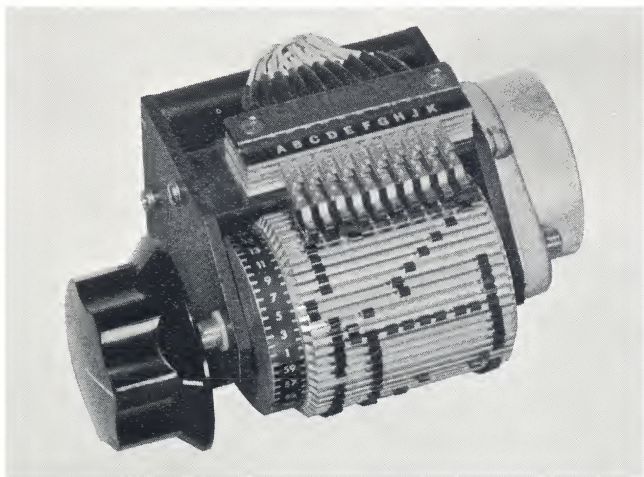
Tel: 914 698-5600, TWX: 710-566-1110

ACTAN PROGRAMMING SWITCHES

... the economical, precise, reliable answer
to programmed electrical switching

Actan Programming Switches are dynamic, electrical controls that can be pre-programmed to meet practically any application requirements and can be re-programmed in the field, at any time, without tools or special skills. These units are extremely compact; incorporating hundreds of electrical cross-points in a few cubic inches.

Basically, the Actan Programmer is a drum-actuated series of contacts. The actuators in the drum are individually spring-loaded, permitting movement along the 60 dove-tailed grooves to an active, or inactive position under any set of contacts. Two types of actuators are available, providing a choice of shorting (camming) or non-shorting (point-to-point) actuation of the contacts.



The switch is available with various types of drive depending upon the application requirements. Manual units are supplied with or without detent — the unit without the detent having a shaft extension providing a means for attaching to a drive provided by the customer — the unit with a detent being designed for manual knob operation and providing a firm, positive positioning function.

For remote or automatic operations, the Actan Switch may be ordered with a synchronous timing motor drive which allows an accurate time base to be established. The standard drive is 1 RPM, providing a one second increment per program. This time base may be changed, on special order, by specifying other speed motors. Special motors are available with speeds from 1 revolution per day to several RPM. The standard Actan Switch has 60 positions, or grooves around the periphery of the drum.

Actan also offers a stepping motor drive whereby a set of contacts on the switch are employed to index the positions commanded by an external control pulse. The standard transfer time (leading edge of the control pulse to contact make or break) is one second while faster transfer speeds are offered on special order. In this configuration, the switch may be field programmed to operate as a stepping switch with from one to 60 positions by merely sliding the actuators in the drum groove to the desired pattern under the control contacts.

For high transfer speeds, a solenoid is employed in conjunction with a special gear box which provides 60 steps in each 360° rotation. This drive provides a transfer time between positions of approximately 100 milliseconds. It also allows the user to employ self-homing since the solenoid is equipped with interrupter contacts which may be connected across one set of the switch contacts providing homing upon command.

For applications requiring fast, complete program changeovers, a removable drum feature is offered at additional cost. The entire programmed drum may be removed and replaced by another programmed drum in less than 60 seconds by merely releasing two spring catches and a flexible drive coupling. Spare drums are available for building up a library of programs.

The Actan units may be cascaded electrically to provide virtually any number of program positions. This is accomplished by using one set of contacts on each Actan for a control circuit. As the first Actan unit completes one revolution, a single actuator located under the control circuit contacts breaks the current flow to the drive motor and switches the next Actan unit drive motor on. This function may be repeated any number of times, and as the last Actan Switch completes its revolution, it can automatically switch back to the first unit.

The simplicity, accuracy, and dependability of the Actan Switch permits its use in countless applications ranging from the most cost-conscious commercial systems to the ultra-sophisticated areas of electronic control. Sealectro maintains an Applications Engineering Department which is at your disposal to aid you in meeting the most exacting switching requirements. They are at your service.

The switches described in this catalog are considered standard, off-the-shelf units and are available from most authorized Sealectro distributors. Engineered models are available upon special order directly from the factory.



Programming Devices Division

SEALECTRO CORPORATION

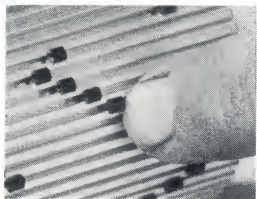
225 Hoyt Street, Mamaroneck, N.Y. 10543

Tel: 914 698-5600, TWX: 710-566-1110

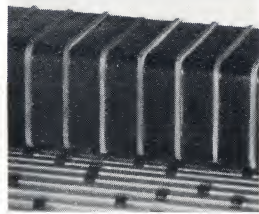
FEATURING ...

- ★ Completely field-adjustable without tools.
- ★ Program accuracies built-in at factory.
- ★ Timing motor, stepping motor, solenoid or manual drives.
- ★ 60 position drum, other sizes on special order.
- ★ 10 to 57 Form C (SPDT) contacts rated at 2 amps., 24 VDC and 115 VAC, guaranteed 10,000,000 transfers. Pre-wired with 12" leads.

- ★ Point-to-point (no-shorting) or camming (shorting) operation at any time. Camming with multiple ON/OFF functions.
- ★ Interchangeable timing and stepping motor drives optional.
- ★ Drum position readout for fast and accurate programming.
- ★ Optional snap-action UL approved contacts for 5 or 15 amps., 115 VAC.
- ★ Optional removable drums for fast program changeover.



Program by sliding actuators along grooves to desired position. No tools or skills required. 100% repeatability.



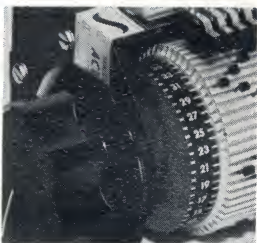
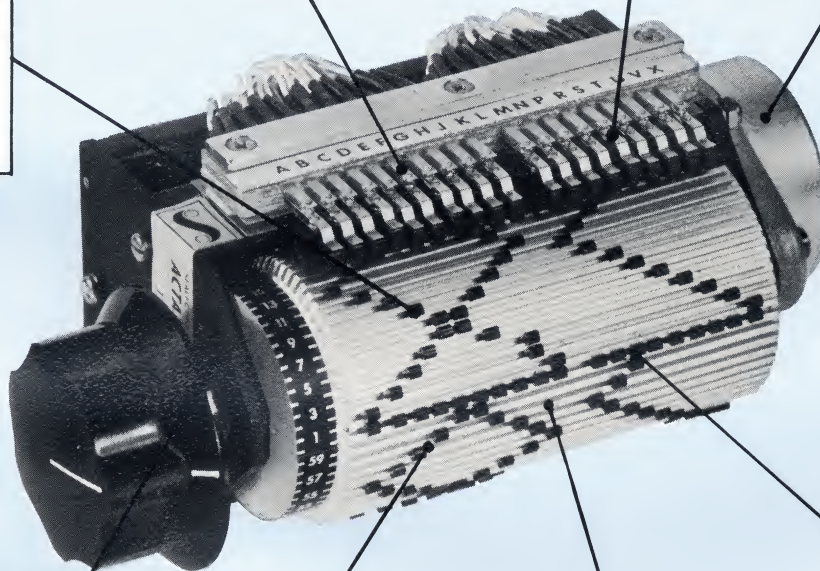
Optional UL approved snap-action contacts are field replaceable.



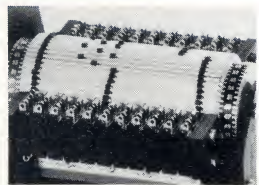
Standard open contacts Form C (SPDT), dry circuit to 2 amps., 24 V.D.C. or 115 V.A.C. All three terminals pre-wired with 12" leads, providing choice of Form A (N.O.) or Form B (N.C.).



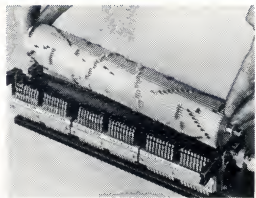
Choice of drives, depending upon requirements.



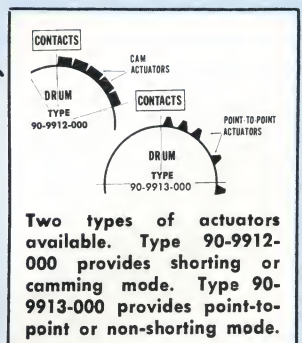
Manual switches with detent feature adjustable detent tension.



Second row of standard or snap-action switches may be incorporated 180° out of phase from first row. Discrete programs for all switches.



Optional side removable drum feature. Drum and bearings are lifted out of frame in seconds for complete, fast changeover.



Two types of actuators available. Type 90-9912-000 provides shorting or camming mode. Type 90-9913-000 provides point-to-point or non-shorting mode.

STANDARD ACTAN MODELS

60 PROGRAM POSITIONS

10 FORM C (SPDT) CONTACTS

PART NUMBER	DRIVE**	SHAFT EXTENSION AND KNOB
91-1061-001	Manual	Yes
91-1062-001	Manual with Detent	Yes
91-1066-000	Timing Motor	No
91-1066-001	Timing Motor	Yes
91-1067-001	Stepping Motor	Yes
91-106(*)-001	Solenoid	Yes

19 FORM C (SPDT) CONTACTS

PART NUMBER	DRIVE**	SHAFT EXTENSION AND KNOB
91-1961-001	Manual	Yes
91-1962-001	Manual with Detent	Yes
91-1966-000	Timing Motor	No
91-1966-001	Timing Motor	Yes
91-1967-001	Stepping Motor	Yes
91-196(*)-001	Solenoid	Yes

38 FORM C (SPDT) CONTACTS

PART NUMBER	DRIVE**	SHAFT EXTENSION AND KNOB
91-3861-001	Manual	Yes
91-3862-001	Manual with Detent	Yes
91-3866-000	Timing Motor	No
91-3866-001	Timing Motor	Yes
91-3867-001	Stepping Motor	Yes
91-386(*)-001	Solenoid	Yes

57 FORM C (SPDT) CONTACTS

PART NUMBER	DRIVE**	SHAFT EXTENSION AND KNOB
91-5761-001	Manual	Yes
91-5762-001	Manual with Detent	Yes
91-5766-000	Timing Motor	No
91-5766-001	Timing Motor	Yes
91-5767-001	Stepping Motor	Yes
91-576(*)-001	Solenoid	Yes

***Solenoid Drive:**

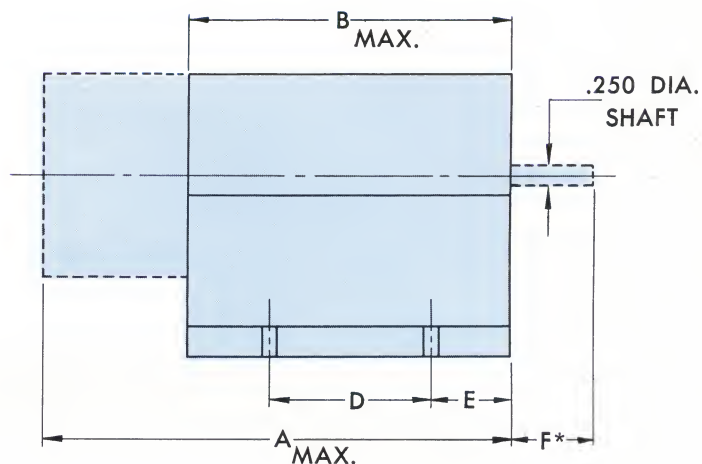
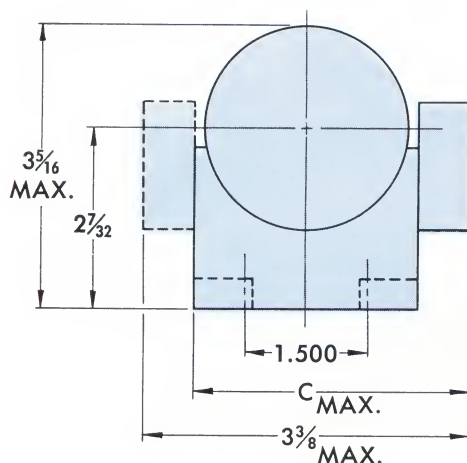
For 24 VDC insert "3" in part number.
 For 48 VDC insert "4" in part number.
 For 115 VAC insert "5" in part number.

****Standard Timing Motor and Stepping Motor Drives**
 are for 115 VAC operation at 1 RPM.

NOTE: All switches are provided with Type 90-9912-000 camming type actuators as standard, however, Type 90-9913-000 non-camming actuators are optional at no extra cost, when specified on order. Standard actuators are black. Other colors, including white, blue, and red are available on special order. All switches include approximately 10% of capacity (crosspoints) in actuators. If extra actuators are required, they may be ordered separately.

The above are considered standard off-the-shelf units. For optional features such as removable drums, special speed motors, clutching mechanisms, and larger capacity switches, consult your Sealectro Distributor, Field Representative or the Factory. Actan switches are available upon special order, with 20, 48, 64, 90, 100, and 120 drum positions for special applications. Complete systems, incorporating multiple programming functions are also available.

DIMENSIONAL INFORMATION



MANUAL DRIVE

CONTACTS	A	B	C	D	E
10	—	2 7/8	2 3/4	1 1/2	2 1/32
19	—	4 7/16	2 3/4	3	1 1/16
38	—	8 5/8	2 3/4	7 1/4	2 1/32
57	—	12 7/16	2 3/4	11	2 1/32

MANUAL DRIVE WITH DETENT

CONTACTS	A	B	C	D	E
10	—	3 7/16	2 3/4	1 1/2	7/8
19	—	5	2 3/4	3	15/16
38	—	9 3/16	2 3/4	7 1/4	2 9/32
57	—	13	2 3/4	11	2 9/32

TIMING AND STEPPING MOTOR DRIVES

CONTACTS	A	B	C	D	E
10	3 7/8	—	2 3/4	1 1/2	2 1/32
19	5 7/16	—	2 3/4	3	1 1/16
38	10 3/4	—	2 3/4	7 1/4	2 1/32
57	14 9/16	—	2 3/4	11	2 1/32

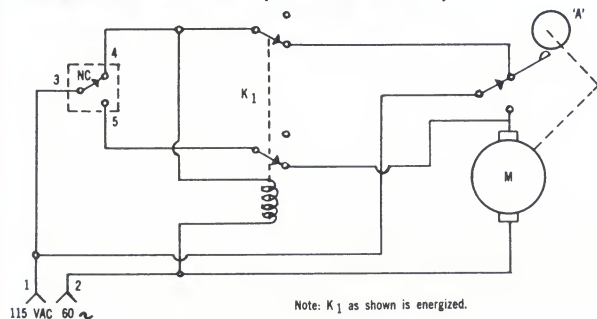
SOLENOID DRIVE

CONTACTS	A	B	C	D	E
10	6 1/4	—	3 1/8	1 1/2	2 1/32
19	7 7/8	—	3 1/8	3	1 1/16
38	12	—	3 1/8	7 1/4	2 1/32
57	15 7/8	—	3 1/8	11	2 1/32

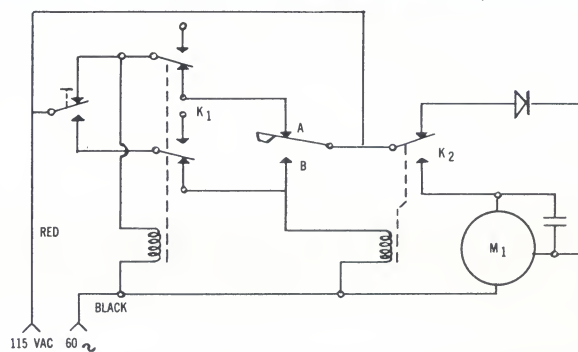
*"F" is standard 1" shaft extension. Other lengths available on special order.

WIRING DIAGRAMS

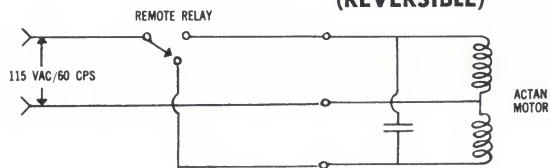
STEPPING MOTOR (SINGLE RELAY)



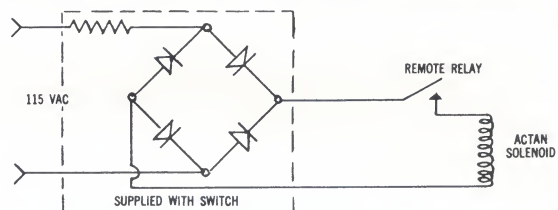
STEPPING MOTOR (DYNAMIC BRAKE)



THREE WIRE MOTOR WITH CAPACITOR (REVERSIBLE)



DC SOLENOID FOR 115 VAC OPERATION



SEAELECTRO CORPORATION

MAMARONECK, N. Y.

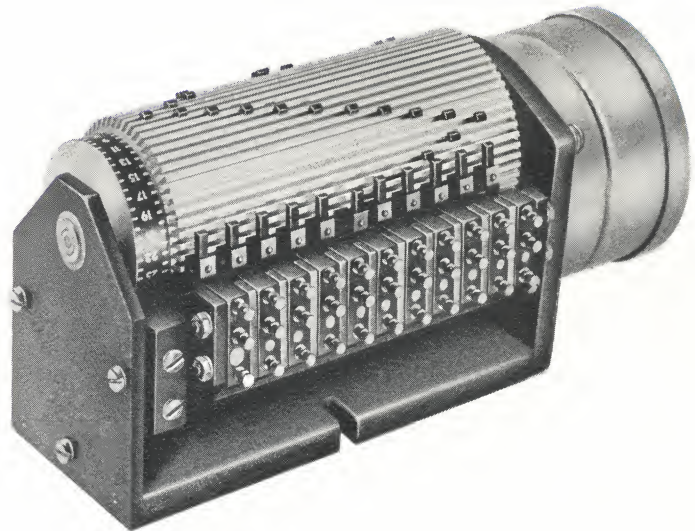


SEAELECTRO
CORPORATION

ACTAN

SNAP-ACTION CONTACT PROGRAMMERS

Actan 60 position field adjustable programming switches are now available with U.L. approved Form C (SPDT), snap-action switches with current ratings of both 5 and 15 Amperes in a variety of configurations. These snap-action units are particularly suitable for slow drum speeds where rapid make and break switch closures are necessary and where additional contact protection against environmental hazards is necessary. Manual, timing motor, stepping motor and solenoid drives are available to provide a maximum in programming flexibility. A complete listing of the standard models available in this series of Actan Programming Switches is listed below. For additional technical information and options, refer to the Standard Actan Programming Switch Catalog.



5 Ampere, 24 V.D.C., 115 or 230 V.A.C.

10 CONTACTS, FORM C (SPDT)

PART NUMBER	DRIVE
92-1061-001	Manual
92-1066-001	Timing Motor
92-1067-001	Stepping Motor
92-106(*)-001	Solenoid

5 CONTACTS, FORM C (SPDT)

PART NUMBER	DRIVE
92-0561-001	Manual
92-0566-001	Timing Motor
92-0567-001	Stepping Motor
92-056(*)-001	Solenoid

15 Ampere, 24 V.D.C., 115 or 230 V.A.C.

7 CONTACTS, FORM C (SPDT)

PART NUMBER	DRIVE
95-0761-001	Manual
95-0766-001	Timing Motor
95-0767-001	Stepping Motor
95-076(*)-001	Solenoid

4 CONTACTS, FORM C (SPDT)

PART NUMBER	DRIVE
95-0461-001	Manual
95-0466-001	Timing Motor
95-0467-001	Stepping Motor
95-046(*)-001	Solenoid

For solenoid operated models replace the () in part number with (3) for 24 VDC operation, (4) for 48 VDC operation, or (5) for 115 VAC operation.



Programming Devices Division

SEAELECTRO CORPORATION

225 Hoyt Street, Mamaroneck, N.Y. 10543

Tel: 914 698-5600, TWX: 710-566-1110

STANDARD 60 PROGRAM ACTAN SWITCH

PART NUMBER CROSS REFERENCE

(Old Catalog Numbers To New Catalog Numbers)

10 CONTACT UNITS

FORMER CAT. NO.	NEW CAT. NO.
BP010A60M-2	91-1061-001
BP010A60MD-2	91-1062-001
BP010A60T-1	91-1066-000
BP010A60T-2	91-1066-001
BP010A60TS-2	91-1067-001
BP010A60S-2	91-106(*)-001

19 CONTACT UNITS

FORMER CAT. NO.	NEW CAT. NO.
BP019A60M-2	91-1961-001
BP019A60MD-2	91-1962-001
BP019A60T-1	91-1966-000
BP019A60T-2	91-1966-001
BP019A60TS-2	91-1967-001
BP019A60S-2	91-196(*)-001

38 CONTACT UNITS

FORMER CAT. NO.	NEW CAT. NO.
BP038A60M-2	91-3861-001
BP038A60MD-2	91-3862-001
BP038A60T-1	91-3866-000
BP038A60T-2	91-3866-001
BP038A60TS-2	91-3867-001
BP038A60S-2	91-386(*)-001

57 CONTACT UNITS

FORMER CAT. NO.	NEW CAT. NO.
BP057A60M-2	91-5761-001
BP057A60MD-2	91-5762-001
BP057A60T-1	91-5766-000
BP057A60T-2	91-5766-001
BP057A60TS-2	91-5767-001
BP057A60S-2	91-576(*)-001

*Solenoid Drive:

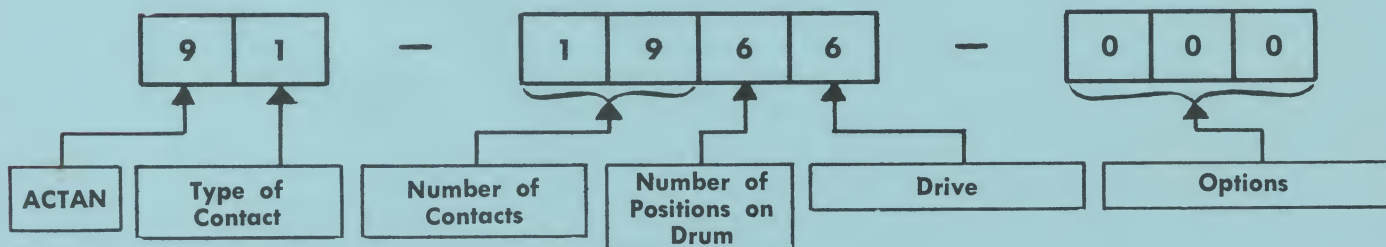
For 24 VDC insert "3" in part number.

For 48 VDC insert "4" in part number.

For 115 VAC insert "5" in part number.

For optional Actan configurations, drives, contacts, etc., to meet special application requirements, contact the Sealectro factory.

ACTAN CATALOG NUMBERING EXPLANATION



Programming Devices Division

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